



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,425	07/20/2001	James V. Tietz	55579USA2B	4868
32692	7590	08/04/2005	EXAMINER	
3M INNOVATIVE PROPERTIES COMPANY			SHAKERI, HADI	
PO BOX 33427			ART UNIT	
ST. PAUL, MN 55133-3427			PAPER NUMBER	
			3723	

DATE MAILED: 08/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

TW

Office Action Summary	Application No.	Applicant(s)	
	09/910,425	TIETZ, JAMES V.	
	Examiner	Art Unit	
	Hadi Shakeri	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9 and 11-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9 and 11-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/06/05 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 14, the phrase "wherein the *wear indicator* comprises a wear indicator composite comprising a *wear indicator* and a binder..." renders the claim indefinite for rendering the definition of the "wear indicator" ambiguous because an element (wear indicator) is recited to include other element comprising itself.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

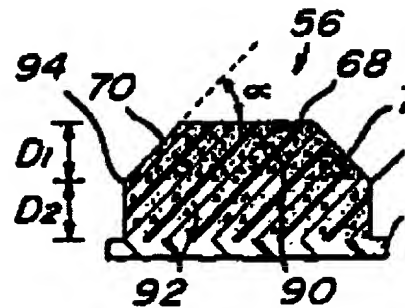
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 3723

6. Claims 1, 3, 5-7, 11-15, 17 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Gagne (US 5,243,790).

Gagne discloses all the limitations of claim 1, i.e., a fixed abrasive article comprising three dimensional abrasive composites elements (56) and wear indicator (94).



Regarding claims, 5-7, 12, 13-15, 17 and 19, Gagne meets the limitations, e.g., wherein the abrasive article is "textured" pad, erodable, visible marker in the binder, coated (method of forming does not further limit the article, i.e., wear indicator on an abrasive surface of the article), or embedded on/in an abrasives surface, wherein marker is on a lower ten percent (04:09); wherein the article comprises posts having the indicator.

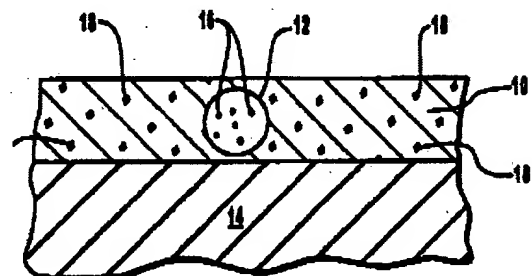
Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3-9 and 11-12 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Robinson et al.

AAPA, e.g., references cited and incorporated, meets all the limitations of claim 1, except for disclosing a wear indicator. Robinson et al. teaches placing a wear indicator in the form of a chemical, physical and/or optical disposed in a void in the binder. It would have been



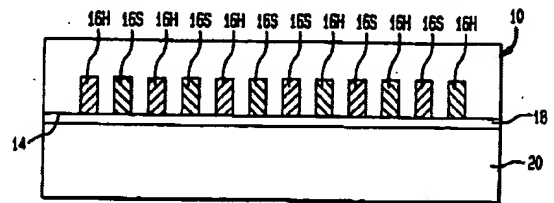
obvious to one of ordinary skill in the art, at the time the invention was made, to modify the

Art Unit: 3723

invention of AAPA with the pad indicator as taught by Robison et al. to indicate the time for changing the pad.

9. Claims 1, 3-9 and 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Cheek et al.

AAPA, e.g., references cited and incorporated, meets all the limitations of claims 1 and 17, except for disclosing a wear indicator (claim 1), in the form of a post (claim 17). Cheek et al. teaches placing a post like wear indicator in the binder. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of AAPA with the pad indicator as taught by Cheek et al. to indicate the time for changing the pad.



10. Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Gagne alone or over Gagne in view of Cheek et al.

Gagne meets all the limitations of claims 14 and 16, except for the wear indicator to be in the form of a cylindrical post and for the article to be a belt. It discloses that the shape and configurations of the posts depends on the intended use (e.g., 08:9-10). Regarding claim 14, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use cylindrical post for a particular application as hinted by Gagne, since it has been held that changing shape, dependent on work-piece parameters, involves only routine skill in the art. *In re Stevens*, 101 US PQ 284(CCPA1954).

Cheek et al. teaches wear indicator in the form of cylindrical posts. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the

Art Unit: 3723

invention of Gagne with the cylindrical post like pad indicator as taught by Cheek et al. to indicate the time for changing the pad.

With regards to claim 16, Gagne discloses in one of the preferred embodiments for the invention to apply to circular polishing pads in CMP (e.g., 02:29-31). Cheek et al. also discloses the invention for CMP, applying the invention to a polishing belt commonly used in CMP would have been well within the knowledge of one of ordinary skill in the art.

11. Claims 4, 13, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over prior art PA (AAPA modified by Robinson et al.) as applied to claim 1 above, further in view of Cheek et al.

PA (prior art, AAPA modified by Robinson) meets all the limitations of claim 4, except for the wear indicator to be in the form of a cylindrical post.

Cheek et al. teaches wear indicator in the form of cylindrical posts. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of prior art with the cylindrical post like pad indicator as taught by Cheek et al. to indicate the time for changing the pad.

Regarding claim 13, placing the indicator or marker in the lower 10% of the post would be well within the knowledge of one of ordinary skill in the art, depending on the workpiece and/or operational parameter, e.g., type of the material used for the pad, how often to change the pad, etc.

Response to Arguments

12. Applicant's arguments filed 05/06/2005 have been fully considered but they are not persuasive.

Art Unit: 3723

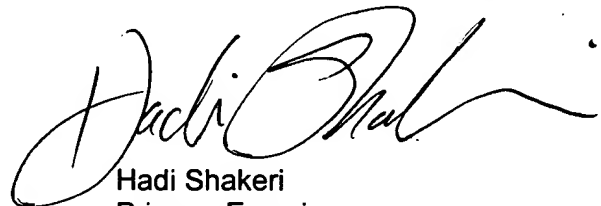
The arguments regarding AAPA, that it is omnibus and is not understood by the Applicant is not persuasive, since as indicated in the office action, AAPA, e.g., references cited and incorporated meets all the limitations of the claims, except for the wear marker. Applicant admits throughout the specification that polishing pads having "textured three-dimensional abrasive composite" are old and well known in the art, e.g., page 6. These pads meet all the limitations of claim 1 except for a wear marker, which is taught by Robinson or Cheek as indication for changing the worn pad, in avoiding, e.g., poor polishing, damaging the workpiece, etc.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is 571-272-4495. The examiner can normally be reached on Monday-Thursday.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri
Primary Examiner
Art Unit 3723
August 2, 2005